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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,997	08/01/2006	Andreas Eipper	12810-00334-US1	4348
30678 7590 07/25/2011 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20006				
EXAMINER				
LEE, DORIS L				
ART UNIT		PAPER NUMBER		
1764				
MAIL DATE		DELIVERY MODE		
07/25/2011		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/587,997  
Filing Date: August 01, 2006  
Appellant(s): EIPPER ET AL.

\_\_\_\_\_  
Georg M. Hasselmann  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed June 20, 2011 appealing from the Office action mailed April 12, 2011.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

US Patent Applications 10/587,998, 11/577,009, 11/659,624, 11/632,703, 11/813,833, 11/996,274, 11/996,489, 11/567,646, 11/632,711, 11/659,506 and 11/815,238

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 1-14

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office

action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

#### **(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

#### **(8) Evidence Relied Upon**

6,084,012	Gaeriss et al	07-2000
GB 2 324 797	Davis et al	04-1998

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

##### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gareiss et al (US 6,084,012)** in view of **Davis et al (GB 2 324 797)**

**Regarding claims 1 and 11-12**, Gareiss teaches a thermoplastic composition  
(Abstract) comprising:

- A) 5 to 99 % by weight of at least one thermoplastic polyester (Abstract)
- C) 0 to 70 % by weight of other additives and processing aids.

However, Gareiss fails to teach the addition of

B) from 0.01 to 50% by weight of a mixture a highly branched or hyperbranched polycarbonate with an OH number of from 1 to 600 mg, further from 10 to 550 and further from 50 to 550 KOH/g of polycarbonate (to DIN 53240, part 2), or

Davis teaches generally, hyperbranched polymers, one of which can be hyperbranched polycarbonate (Abstract) with both structural and molecular non-uniformity (Page 1, lines 15-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the hyperbranched polycarbonate of Davis to the composition of Gareiss. One would have been motivated to do so in order to receive the expected benefit of controlling the processability of the thermoplastic polyester by behaving like a reactive plasticizer (Davis, page 16, last paragraph). They are combinable because they are concerned with the same field of endeavor, namely additives of thermoplastics. Absent objective evidence to the contrary and based upon the teachings of the prior art, there would have been a reasonable expectation of success.

As to the amount of the hyperbranched polymers and the OH number of the polycarbonate, it is the examiner's position that the amounts are result effective variables because changing them will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result

effective variable in a known process is ordinarily within the skill of the art.” See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In view of this, it would have been obvious to one of ordinary skill in the art to utilize appropriate amounts of hyperbranched polyester or highly branched polycarbonate to achieve the desired processability of the flame retarded thermoplastic, including those within the scope of the present claims, so as to produce desired end results.

**Regarding claim 2**, modified Gareiss teaches that the molecular weight of the hyperbranched polycarbonate is 5,000 (Davis, page 20, Example 5).

**Regarding claims 3-4**, modified Gareiss fails to explicitly teach the glass transition temperature and the viscosity of the hyperbranched polyester, however, it does disclose a hyperbranched polycarbonate that meets the claimed limitations, it is therefore inherent that the hyperbranched polycarbonate of modified Gareiss has such properties as presently claimed since such a property is evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. In *re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

**Regarding claims 5-8**, as these are product-by-process claims, patentability of said claim is based on the recited product and does not depend on its method of production. Since the product claimed is the same as product disclosed by Davis the claim is unpatentable even though the Davis product was made by a different process. In *re Marosi*, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

**Regarding claims 9 and 10**, modified Gareiss teaches that a fiber, foil, or molding can be made (Gareiss, col. 13, lines 1-10) via conventional apparatus to form shaped articles (Gareiss, col. 13, lines 1-10).

**Regarding claims 13-14**, modified Gareiss teaches that hyperbranched polymers are made (Davis, page 1, first paragraph) and further teaches that only when the degree of branching is greater than 40%, is a dendritic polymer considered to be a hyperbranched polymer (Davis, page 2, lines 13-18).

It is well settled that where the prior art describes the components of a claimed compound or compositions in concentrations within or overlapping the claimed concentrations a prima facie case of obviousness is established. See *In re Harris*, 409 F.3d 1339, 1343, 74 USPQ2d 1951, 1953 (Fed. Cir. 2005); *In re Peterson*, 315 F.3d 1325, 1329, 65 USPQ 2d 1379, 1382 (Fed. Cir. 1997); *In re Woodruff*, 919 F.2d 1575, 1578 16 USPQ2d 1934, 1936-37 (CCPA 1990); *In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974).

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. **Claims 1-14** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claims 1-20** of copending **Application No. 11/996,489**.

The claims of Application '489 recite a polymer with, a hyperbranched polycarbonate and other conventional additives.

Although it is noted that the copending application contains additional ingredient(s) not explicitly present in the instant claims, nevertheless, given that both sets of claims are recited in open language (cf. comprising) so that the present claims are open to the inclusion of additional unrecited ingredients, the overlap in scope supports and warrants the instant rejection.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. **Claims 1-14** are directed to an invention not patentably distinct from **claims 1-20** of commonly assigned **Application No. 11/996,489**. Specifically, see the discussion in paragraph 4 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP



Chapter 2300). Commonly assigned Application No. 11/996,489, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

6. **Claims 1-14** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claims 1-20** of copending **Application No. 11/815,238**.

The claims of Application '238 recite a polymer with a hyperbranched polycarbonate and other conventional additives.

Although it is noted that the copending application contains additional ingredient(s) not explicitly present in the instant claims, nevertheless, given that both sets of claims are recited in open language (cf. comprising) so that the present claims are open to the inclusion of additional unrecited ingredients, the overlap in scope supports and warrants the instant rejection.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. **Claims 1-14** are directed to an invention not patentably distinct from **claims 1-20** of commonly assigned **Application No. 11/815,238**. Specifically, see the discussion in paragraph 6 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned Application No. 11/815,238, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

#### **(10) Response to Argument**

**Appellant's argument:** Davis fails to suggest that the hyperbranched polymers may be used to control the processability of thermoplastic polymers.

**Examiner's response:** *The examiner has provided adequate motivation to combine the references and it is clearly stated in the rejection (to control the processability of the thermoplastic polyester by behaving like a reactive plasticizer, (Davis, page 16, last paragraph).*

**Appellant's argument:** Appellant's argue unexpected results which are shown by applicant's data.

**Examiner's response:** *The examiner has considered the data presented in the results. It is not persuasive most notably because the data is not commensurate with the scope of the claimed invention. For example, applicant claims component A) can be present in the range from 10 to 99.99% by weight; however, the applicant provides data mainly in the 90-99 wt % range. Applicant also argues that the MVR value is unexpectedly high for the inventive compositions. However, it is noted that the MVR for the comparative example 2C is 54.5 which higher that the MVR value for inventive example 6 (34.4) which does not support the applicant's argument that the inventive composition has unexpected high MVR values.*

**Appellant's argument:** A skilled artisan would not have a reasonable expectation of success that adding a hyperbranched polymer to the molding composition of Gareiss would result in a dramatic increase of the MVR.

**Examiner's response:** *Without a clear teaching away from either of the prior art references, one of ordinary skill in the art would have recognized the motivation to combine the prior art references to arrive at the presently claimed invention. It is noted that the MVR property is not elucidated in the limitations of the claims. The fact that*

*applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).*

**Appellant's argument:** The examiner has failed to provide a proper rationale or motivation as to why a skilled artisan would have combined Gareiss and Davis to arrive at the claimed subject matter. The skilled artisan is not explicitly directed at polycarbonates of Davis. Davis refers only to thermoplastic compositions, not thermoplastic polyesters. Plasticizers are additives generally for PVC materials and not polyesters.

**Examiner's response:** *The examiner has provided adequate motivation to combine the references and it is clearly stated in the rejection (to control the processability of the thermoplastic polyester by behaving like a reactive plasticizer, (Davis, page 16, last paragraph). Although the cited paragraph does not explicitly state hyperbranched polycarbonate, rather it says "hyperbranched polymers of this invention" which as the Abstract of Davis states can be a hyperbranched polycarbonate which is one of only a few types of hyperbranched polymers listed in the Davis references.. The argument that plasticizers are used in PVC materials is moot because Davis clearly teaches in the final paragraph on page 15 that the plasticizers can be incorporated in thermoplastic compositions. Gareiss teaches that the composition is a thermoplastic polyester.*

**Appellant's argument:** Regarding claim 5, the process of Davis does not result in the same structure as the claimed invention. Most notably, the polymer made by the process specified in claim 5 does not have imidazolidine end groups.

**Examiner's response:** *Applicant's argument that Davis does not teach the hyperbranched polycarbonate as presently claimed is not persuasive because although applicants argue that the prior art polycarbonates have carbonyldiimidazole as end groups whereas the presently claimed polycarbonates do not, is not persuasive because Davis teaches that the imidazolidine groups can be reacted to form different groups if desired (page 6, first full paragraph). As to the poor processability of Davis's hyperbranched polycarbonates, as no data has been provided by applicant to show this poor performance, no definitive conclusion can be drawn.*

**Appellant's argument:** Appellants request the withdrawal of the provisional double patenting rejection over the later-filed copending applications 11/966,489 and 11/815,238.

**Examiner's response:** *The double patenting rejection set forth against copending applications 11/996,489 and 11/815,238 are maintained because the rejection is proper it will be maintained until such time as a proper response to it is filed or conditions appropriate for removal of the rejection are present. As this not the only rejection remaining in the earlier filed of the two pending application, the withdrawal of these double patenting rejections are not appropriate at this time. See MPEP 804 B. 1.*

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Doris L Lee/

Examiner, Art Unit 1764

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1764

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